

## A PRELIMINARY REPORT ON WOYTKOWSKI'S LAST PERUVIAN COLLECTIONS

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From May 1958 until September 1962 the late Felix Woytkowski, then residing in Lima, Peru, collected in eight central and northern provinces of Peru 3338 numbers of flowering plants and ferns with one to eight samples per number. These were sent to the Missouri Botanical Garden where the vast majority have been identified. Many of the earlier numbers and a goodly amount of later numbers have been sent to several large American herbaria. Woytkowski was especially interested in collecting any woody plants reported by the natives as having medicinal properties; many of his collections serve as vouchers for large samples of the dried vegetative portions of plants suspected of being medicinally important. Ciba Pharmaceutical Company of Summit, New Jersey, sponsored Woytkowski's recent field work in Peru up to 1964, as well as supported in part the herbarium work at the Missouri Botanical Garden. I wish to acknowledge this support.

Woytkowski, as his labels attest, made great efforts in the field to gain information concerning medicinal uses of the plants as well as the native names. For recent reviews of common names of Peruvian plants the reader may consult Biota, IV, pp. 77-91, 102-144, 164-192, 205-236 (1962), 259-276, 281-316, 353-368 (1963), V, pp. 6-41 (1964), cont'd. The fact that Woytkowski collected much material of the Apocynaceae, Bignoniaceae, Compositae, Euphorbiaceae, Leguminosae, Malpighiaceae, Melastomaceae, Piperaceae, Rubiaceae, Sapindaceae, and Solanaceae reflects this interest. A modest number of representatives of the following families were collected: Guttiferae, Loranthaceae, Menispermaceae, Orchidaceae, and Verbenaceae.

While the late Dr. Robert E. Woodson Jr., Curator of the Herbarium at the Missouri Botanical Garden, supervised the identification of the Woytkowski collections (nos. 5000 to 8186) until his death in November of 1963, most of the routine herbarium identifications were made by Dr. James A. Duke, now of Battelle Memorial Institute, Columbus Ohio, who served as Assistant Curator at the Missouri Botanical Garden during most of the period from October 1958 to September 1962. Noteworthy is the fact that Duke and Bunting described in 1961 a new genus of the Loganiaceae, Sanango (Ann. Mo. Bot. Gard. 48: 270.)

The following specialists were kind enough to identify a limited number of specimens in the years 1958-1962: Caroline K. Allen, George Bunting, Jose Cuatrecasas, R.S. Cowan, Calaway H. Dodson, Robert L. Dressler, Richard Holm, Gordon Hunter, Paul C. Hutchinson, Hugh Iltis, John Ingraham, E.C. Leonard, Alicia Lourteig, Bassett Maguire, Herbert Mason, Mildred Mathias, Rogers McVaugh, Harold Moldenke, C.V. Morton, Loren I. Nevling, Steven Oakland, Howard Pfeifer, Peter H. Raven,

André Robyns, N.Y. Sandwith, L.B. Smith, William L. Stern, Dieter Wasshausen, R. Woodson, J.J. Wurdack, and T.G. Yuncker.

While I played a minor role in identifying the Woytkowski collections prior to September 1963, I determined many of the collections from No. 7000 to 8338. In addition, I rechecked a number of puzzling collections in the No. 5000 to No. 7000 sequence as well as supplied a modicum of binomials for unidentified numbers. Hopefully in the near future a complete list of Woytkowski's more than 3300 numbers will be published.

The Woytkowski collection under discussion supplies taxonomists with a representative, though obviously limited cross-section of the phanerogams, especially those of the Dicotyledoneae, as well as of the ferns, in choice collecting areas north of Lima, especially at elevations between 800 and 2500 meters. Woytkowski's collections are ornaments in any herbarium as he dried his plants with unusual care.

The following is a list of the localities in Peru, including the respective Departments, the numerical ranges of collection lots, the specific localities, and the months in which collections were made. The Departments of Peru in which Woytkowski collected are abbreviated as follows:

- (A) Department of Amazonas;
- (C) Department of Cajamarca;
- (H) Department of Huanuco
- (J) Department of Junin
- (LA) Department of Lambayeque
- (L) Department of Loreto
- (P) Department of Pasco
- (SM) Department of San Martin

#### 1958

Tingo Maria (H) 650 m.	May - June	5000 - 5009
Santa Isabel to Cucharas including Río Pacay (H) 600 m.	June	5010 - 5020
Tingo Maria (H) 650 m.	June	5021
Chinchao Carpish (H) 2400 m.	June	5024
Monzón (H)	June - July	5029 - 5031
Saposoa (SM) 400 m.	July	5034 - 5104
Río San Alejandro (L) 300 m.	July	5105 - 5124
Iquitos (Nanay River) (L)	December	5125 - 5174

#### 1959

Panao (H)	March	5175 - 5189
Muña (H)	March	5190 - 5268
Chaglia (H)	March	5269 - 5295
Tingo Maria (H) 670 m.	April	5296 - 5311
Monzón (H)	April	5312 - 5334
Aguaytia (L) 250 m.	May - June	5335 - 5376
Tingo Maria (H) 670 m.	August	5377 - 5399
Saposoa (SM)	September	5400 - 5417
Gramalote (SM) - forested ravine		
N. of Saposoa	October	5418 - 5502
Huahuiva (SM) - N.W. of Saposoa	October	5503 - 5517

<u>1960</u>		
Huatsiroke (L) 1800- 2500 m.; rain forest of Ia Merced	February - March	5536 - 5581
Jaen (C) 500 m.; very dry Andean woods between Jaen and Olmos	March	5582 - 5612
Aramango (A) - S. of Nazaret, shores of Río Marañon	April	5613 - 5646
Mirana (A)	April	5647 - 5655
Pucara between Jaen & Olmos (C) 900 m.	April	5656 - 5691
Montana de Santa Rosa (C) 1200 m.; rain forest	April - May	5692 - 5744
Pucallpa (L) 2400 m.; low deciduous forests	June	5745 - 5788
Rio Negro to Satipo (J) 750 - 1000 m.	August	5789 - 5878
Satipo (J) 750- 1000 m.; forested hills	September	5879 - 5926
Sanibeni (J) 750 - 1000 m.; forested hills	October	5927 - 5963
Mazamari (J) 750 - 1000 m., forested hills	October	5964 - 6028
Rioja (SM) 800 m.; secondary forests	December	6029 - 6171

1961

Río Negro to Rioja, Río Seco - Trapiche (SM)	January	6172 - 6259
Pucallpa (L) 2400 m.	April	6260
Yarinacocha (L)	April	6261 - 6281
Ucayali River & Paucococha (L)	April	6282 - 6307
Pacacocha (L)	May	6308 - 6325
Yaupi (J) 1580 m.	June	6326 - 6510
Manto (J) 1100 m.	June	6511 - 6552
Yaupi (J) 1580 m.	July	6553 - 6562
Yunguy (J) 1600 m.	July	6563 - 6616
Yucapata (J) 1400 m.	July	6617 - 6675
Paucartambo (J) 2800 m.	July	6676 - 6748
Olmos between Chiclayo & Pucará (LA & C)	September	6749 - 6750
Purculla (LA & C) 2400 m.; low deciduous forest	September	6751 - 6794
Mandanguia (C) 800 m; low deciduous forest	October	6795 - 6928
Colasai (C) 2500 - 2800 m.; humid subtropical forests	October	6929 - 6957
Mandanguia (C)	October	6958 - 6971
Colasai (C)	November	6972 - 7036
Mandanguia	November	7037 - 7070

<u>1962</u>		
Juanjui (SM) 400 - 600 m.;		
tropical forests Río		
Huallaga	March	7071 - 7122
Huinguillo (SM) 400 - 600 m.		
S. of Río Huallaga	March	7123 - 7189
Santa Luisa (SM) 400 - 600 m.		
forested hills Huallaga		
Valley	March	7190
Costarica (SM) 600 m. - E. of		
Santa Luisa	March	7191
Huinguillo (SM)	March	7192 - 7194
Juanjui (SM)	April	7195 - 7225
Saposa (SM)	April	7226 - 7299
Gramalote (SM); forested ravine		
N. of Saposo	May	7300 - 7317
Huahuiva (SM); N.W. of Saposo	May	7318 - 7322
Villarica (P) 1500 m; forested		
hills	June	7323 - 7355
Hacienda Genova (J) 1600 m.;		
forested mountains	July	7356 - 7401
San Ramon (J) 900 m.; valley		
of Chanchamayo	July	7402 - 7415
Agua Dulce & Utcuyacu (J)		
1600 - 1800 m.; forested		
mountains	July	7416 - 7484
San Ramón (J) 900 m.	August	7485 - 7489
Pendencia (H) 700-900 m.;		
forested Río Huallaga, 30 km.		
N.E. Tingo Maria	Sept.-Nov.	7490 - 7536
Previsto (L) 420-500 m. confluen-		
ce of Previsto & Yurac Rivers;		
rain fall 4,950 mm.	Sept.-Nov.	7537 - 7639
Palo de Acero (H) 900 - 1000 m.;		
region of Río Monzón forests		
N.W. of Tingo Maria	Sept.-Nov.	7640 - 7669
Leimbebamba (A) 2000 - 2500 m.;		
near rainy alpine tundra	Sept.- Nov.	7670 - 7846
Cachicoto (H) 800 m.; S of		
Monzon	March - April	7847 - 7910
Tumanga (H) 2400 m.; rain		
forests of Cordillera		
Carpish, N. of Acomayo	March - April	7911 - 8015
Rodriguez de Mendoza (A) 1400-		
2500 m.; low forests E.		
Andean slopes	July - August	8018 - 8186
Rodriguez de Mendoza (A) 1500 m.	August-Sept.	8187 - 8338

In the summer of 1964 Woytkowski sent a few additional collections to the Missouri Botanical Garden. These were collected in Juanjui, Department of San Martín. I wish to thank Dr. André Robyns for reading the ms. and Sister M. Victoria Hayden for the critical analysis of seed structure in some collections of Rubiaceae.